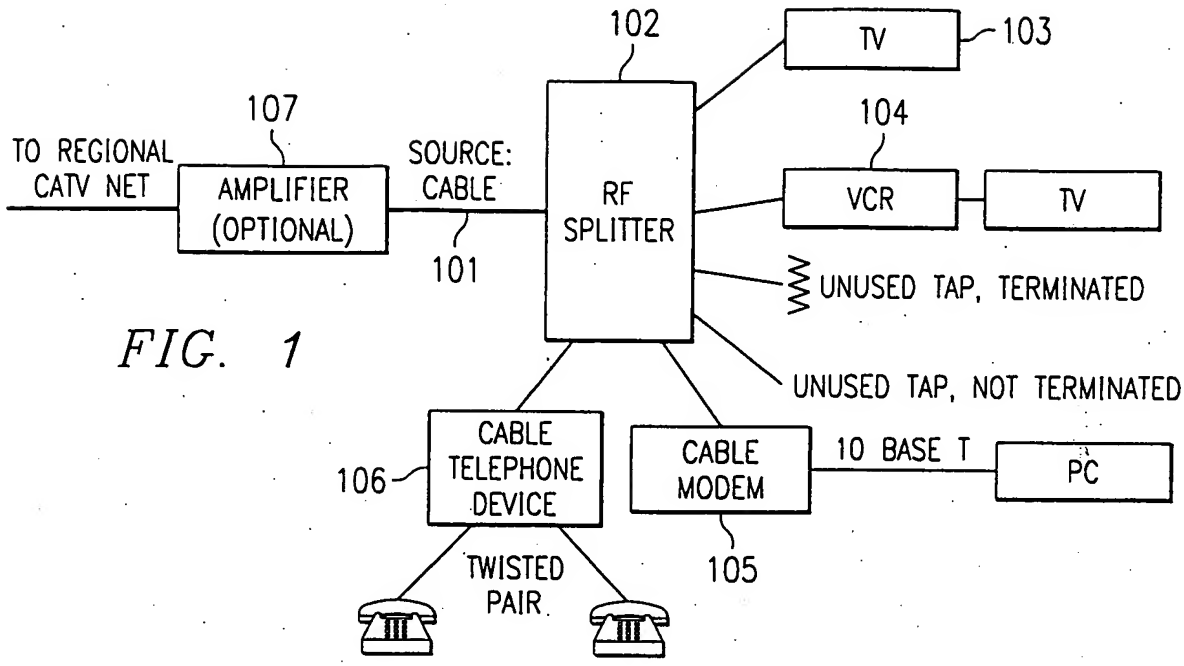

102
TV
103
107
104
TO REGIONAL CATV NET
AMPLIFIER (OPTIONAL)
SOURCE: CABLE
RF SPLITTER
VCR
TV
101
UNUSED TAP, TERMINATED
UNUSED TAP, NOT TERMINATED
CABLE TELEPHONE DEVICE
106
CABLE MODEM
10 BASE T
PC
TWISTED PAIR
105

FIG. 1

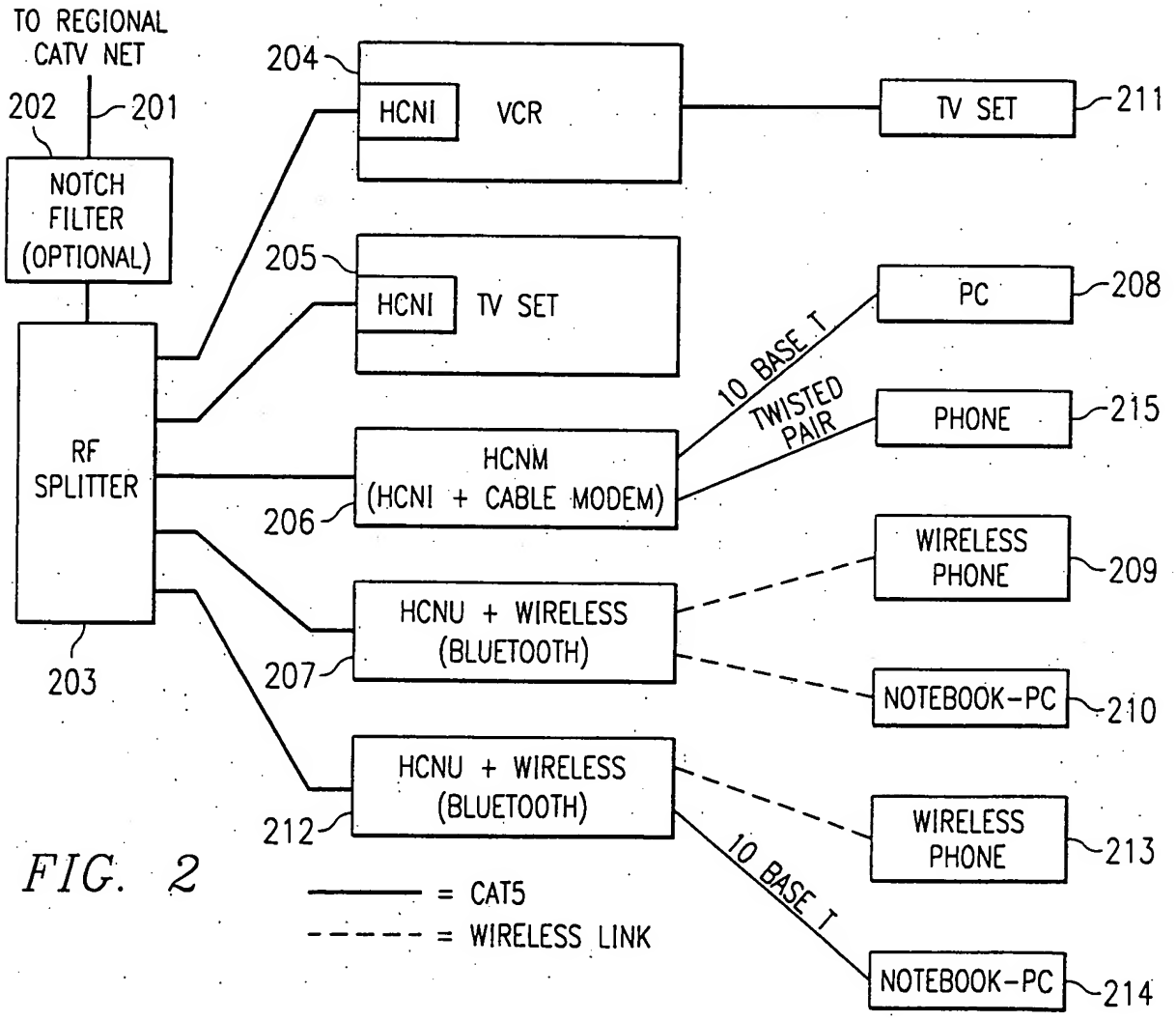
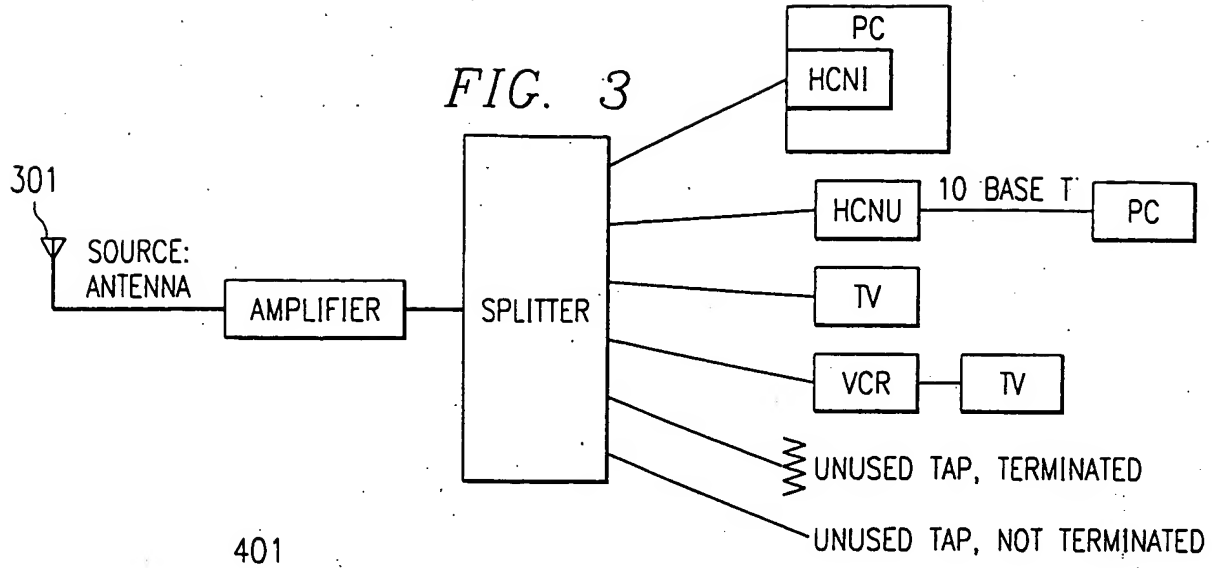

TO REGIONAL CATV NET
202
201
204
HCNI
VCR
TV SET
211
NOTCH FILTER (OPTIONAL)
205
HCNI
TV SET
PC
208
10 BASE T
TWISTED PAIR
RF SPLITTER
HCNM (HCNI + CABLE MODEM)
PHONE
215
206
WIRELESS PHONE
209
HCNU + WIRELESS (BLUETOOTH)
203
207
NOTEBOOK-PC
210
HCNU + WIRELESS (BLUETOOTH)
212
WIRELESS PHONE
213
10 BASE T
= CAT5
= WIRELESS LINK
NOTEBOOK-PC
214

FIG. 2

FIG. 3



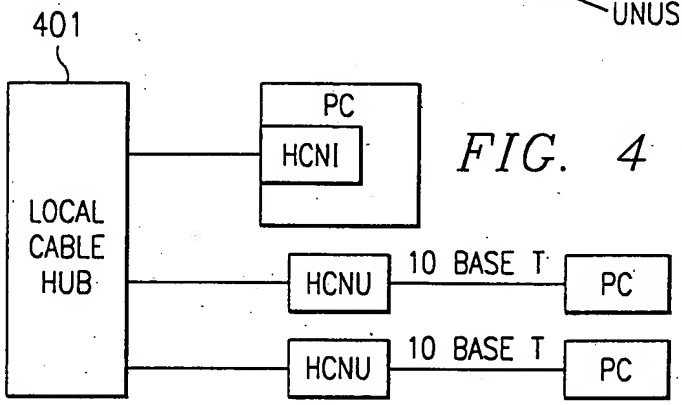




FIG. 4

FIG. 5

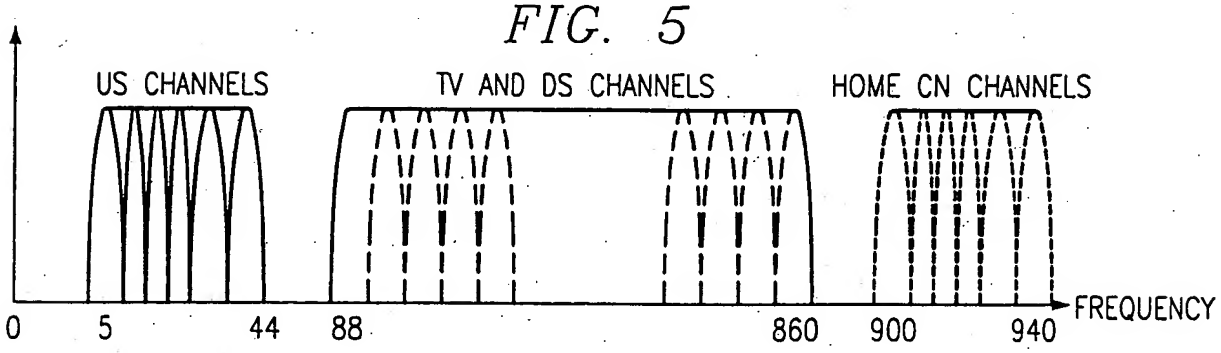



FIG. 7

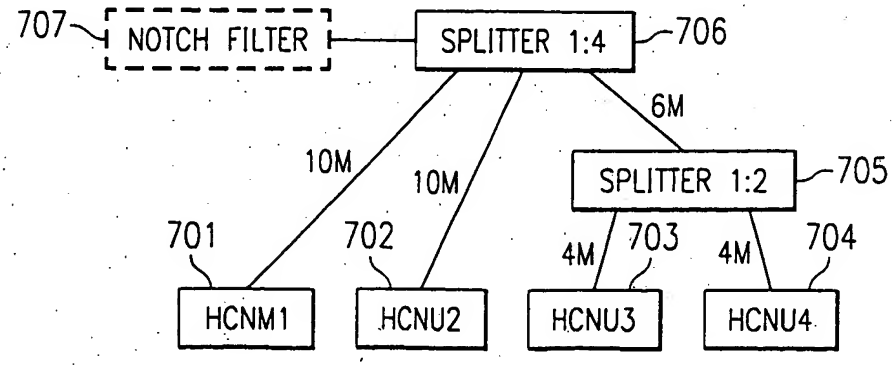


FIG. 6

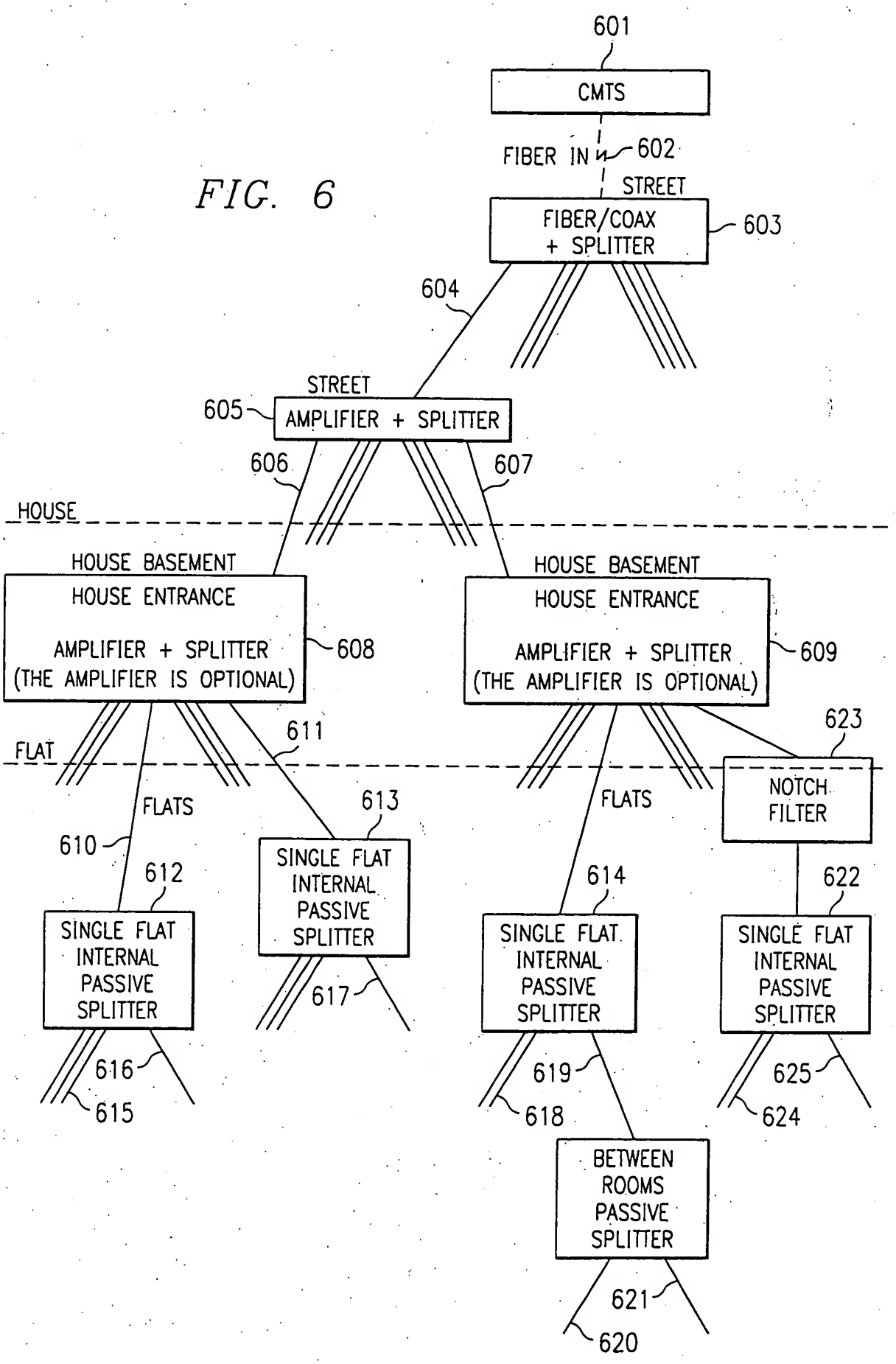

601
CMTS
FIBER IN
602
STREET
FIBER/COAX
+ SPLITTER
603
604
STREET
605
AMPLIFIER + SPLITTER
606
607
HOUSE
HOUSE BASEMENT
HOUSE ENTRANCE
AMPLIFIER + SPLITTER
(THE AMPLIFIER IS OPTIONAL)
608
HOUSE BASEMENT
HOUSE ENTRANCE
AMPLIFIER + SPLITTER
(THE AMPLIFIER IS OPTIONAL)
609
623
FLAT
611
FLATS
610
612
SINGLE FLAT
INTERNAL
PASSIVE
SPLITTER
613
SINGLE FLAT
INTERNAL
PASSIVE
SPLITTER
617
FLATS
614
SINGLE FLAT
INTERNAL
PASSIVE
SPLITTER
NOTCH
FILTER
622
SINGLE FLAT
INTERNAL
PASSIVE
SPLITTER
616
615
619
618
625
624
BETWEEN
ROOMS
PASSIVE
SPLITTER
621
620

FIG. 8

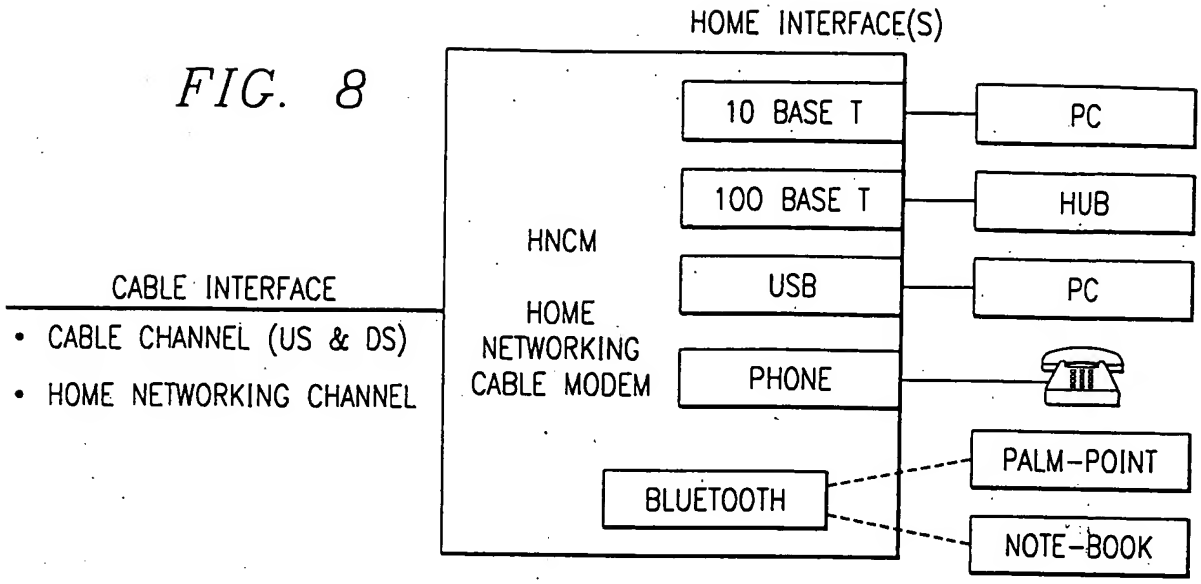

HOME INTERFACE(S)
10 BASE T
PC
100 BASE T
HUB
HNCM
USB
PC
CABLE INTERFACE
• CABLE CHANNEL (US & DS)
• HOME NETWORKING CHANNEL
HOME NETWORKING CABLE MODEM
PHONE
PALM-POINT
BLUETOOTH
NOTE-BOOK

FIG. 9

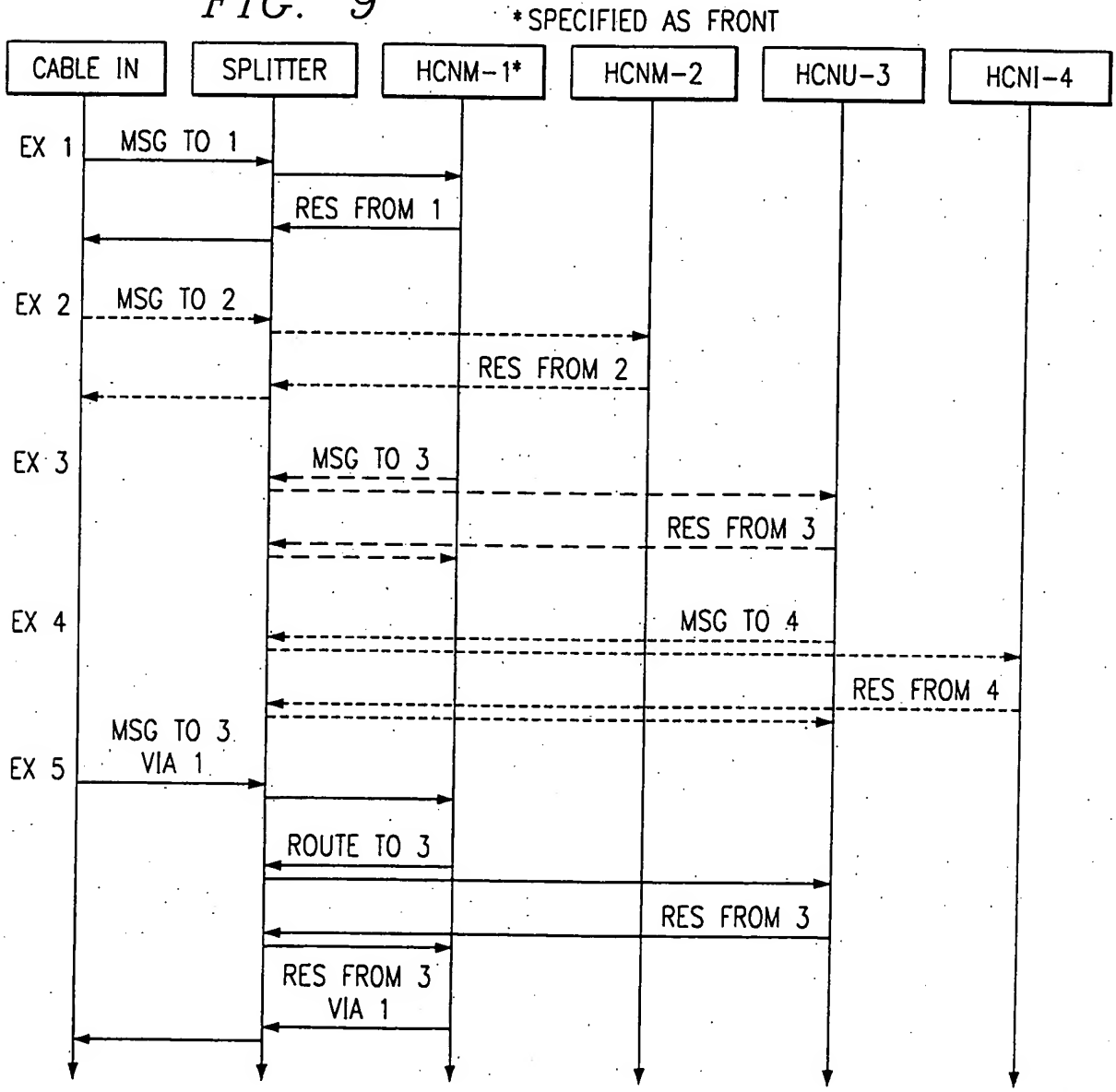

*SPECIFIED AS FRONT
CABLE IN
SPLITTER
HCNM-1*
HCNM-2
HCNU-3
HCNI-4
EX 1
MSG TO 1
RES FROM 1
EX 2
MSG TO 2
RES FROM 2
EX 3
MSG TO 3
RES FROM 3
EX 4
MSG TO 4
RES FROM 4
EX 5
MSG TO 3 VIA 1
ROUTE TO 3
RES FROM 3
RES FROM 3 VIA 1

FIG. 10

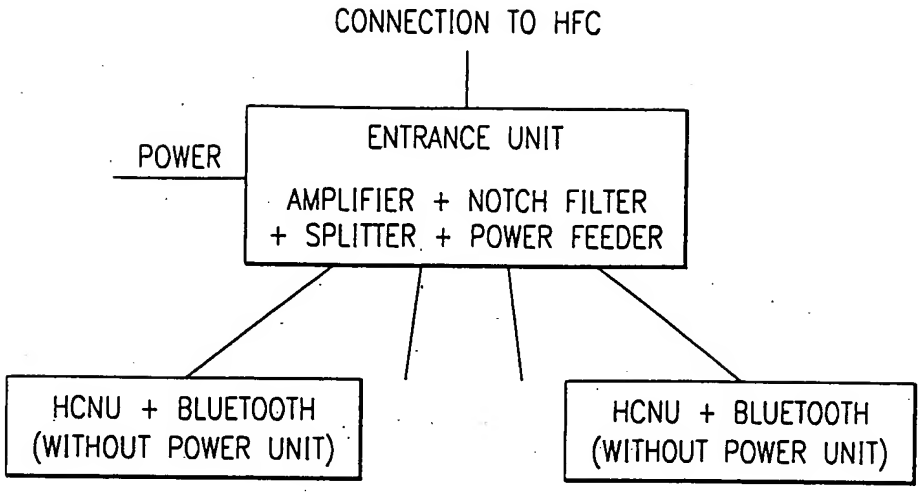

CONNECTION TO HFC
POWER
ENTRANCE UNIT
AMPLIFIER + NOTCH FILTER
+ SPLITTER + POWER FEEDER
HCNU + BLUETOOTH
(WITHOUT POWER UNIT)
HCNU + BLUETOOTH
(WITHOUT POWER UNIT)

FIG. 11

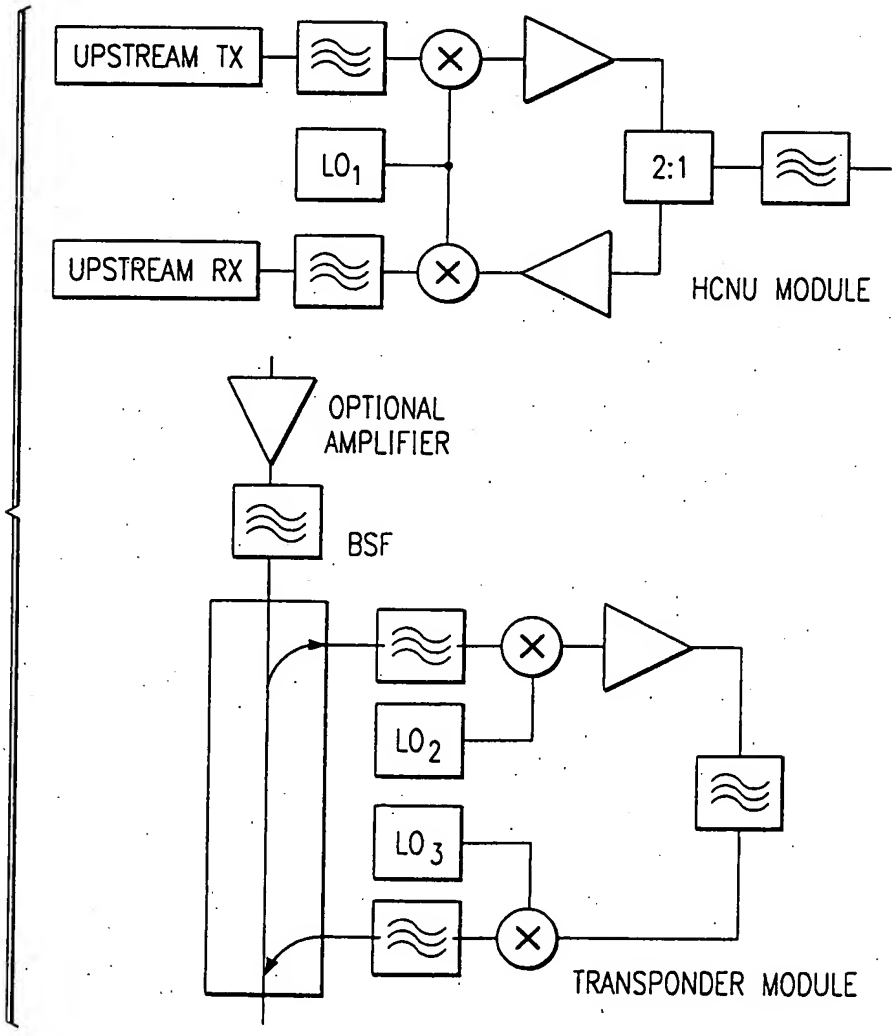

UPSTREAM TX
LO1
2:1
UPSTREAM RX
HCNU MODULE
OPTIONAL
AMPLIFIER
BSF
LO2
LO3
TRANSPONDER MODULE

FIG. 12

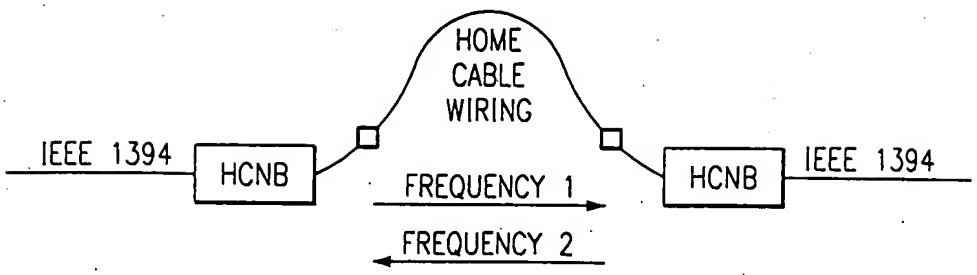



FIG. 13

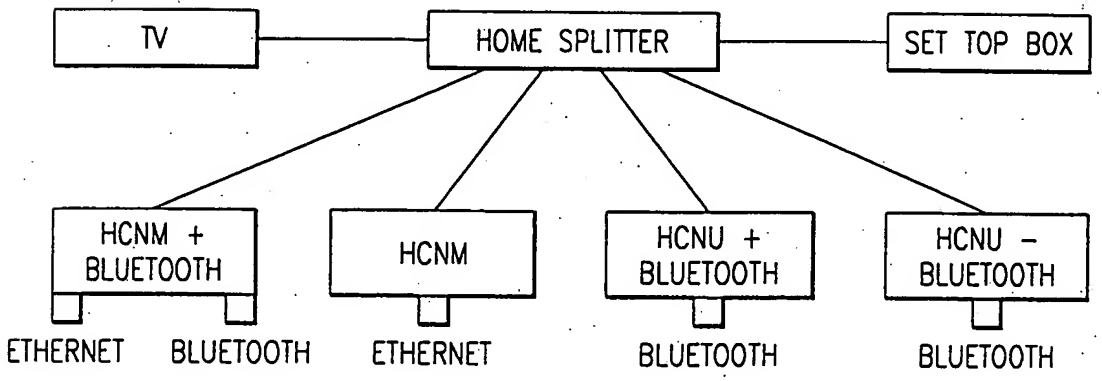



FIG. 14

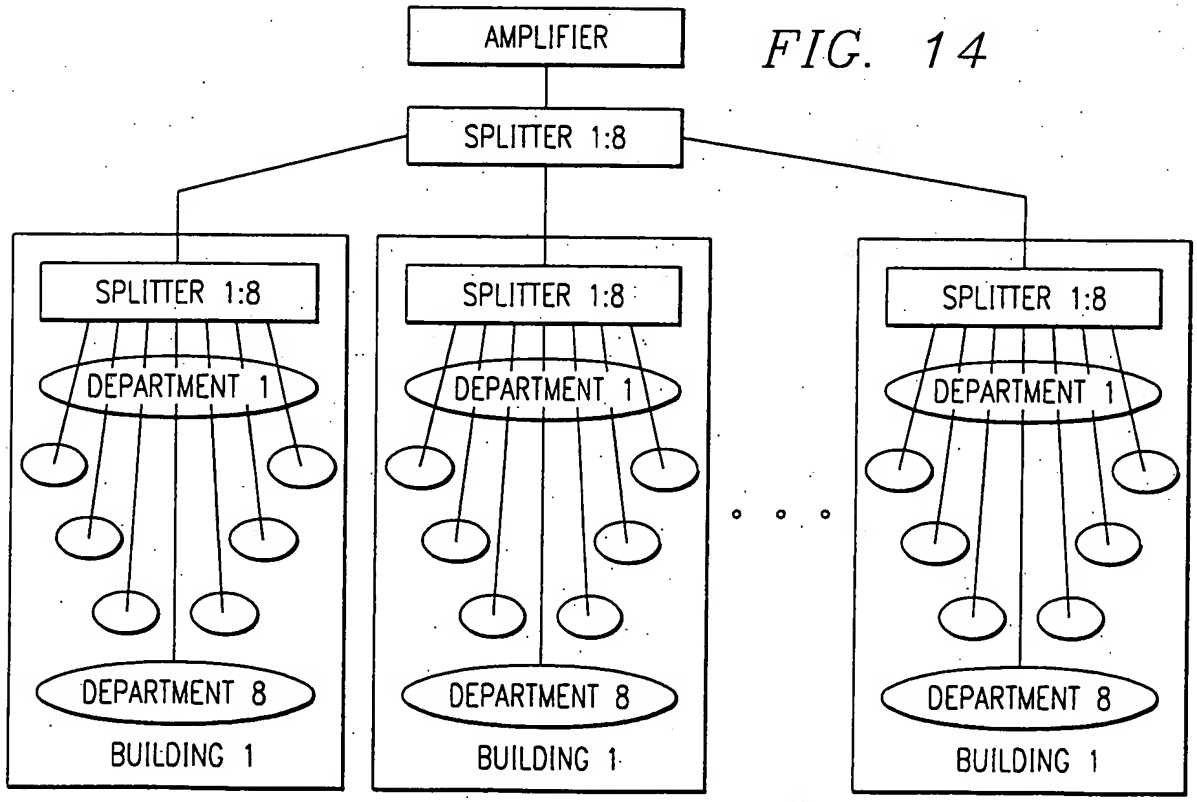


FIG. 15

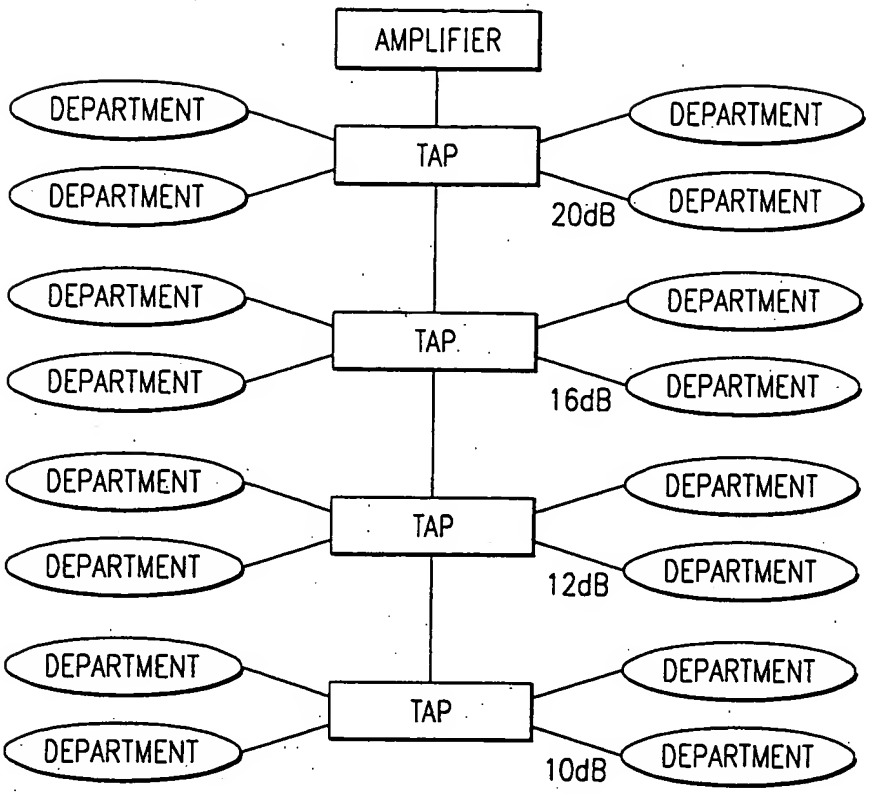



FIG. 16

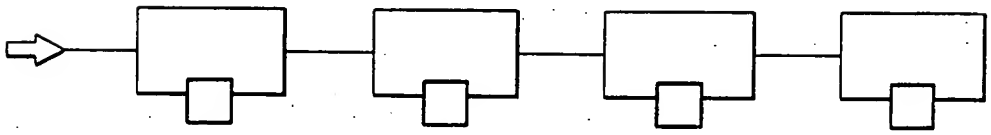


FIG. 17

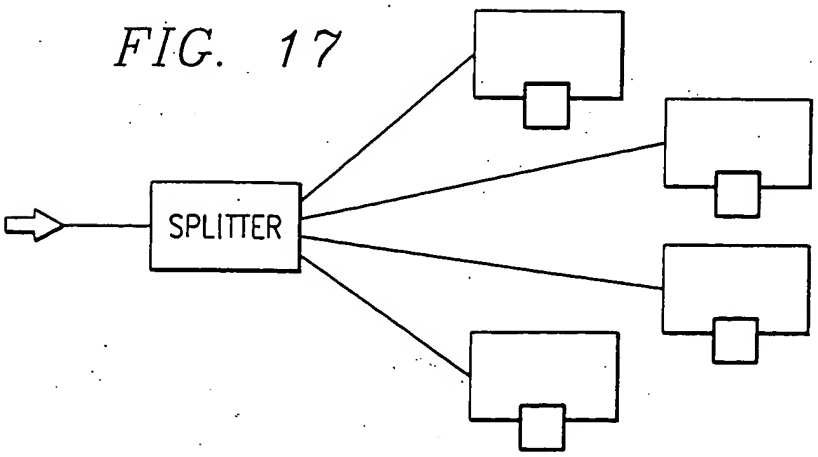


FIG. 18

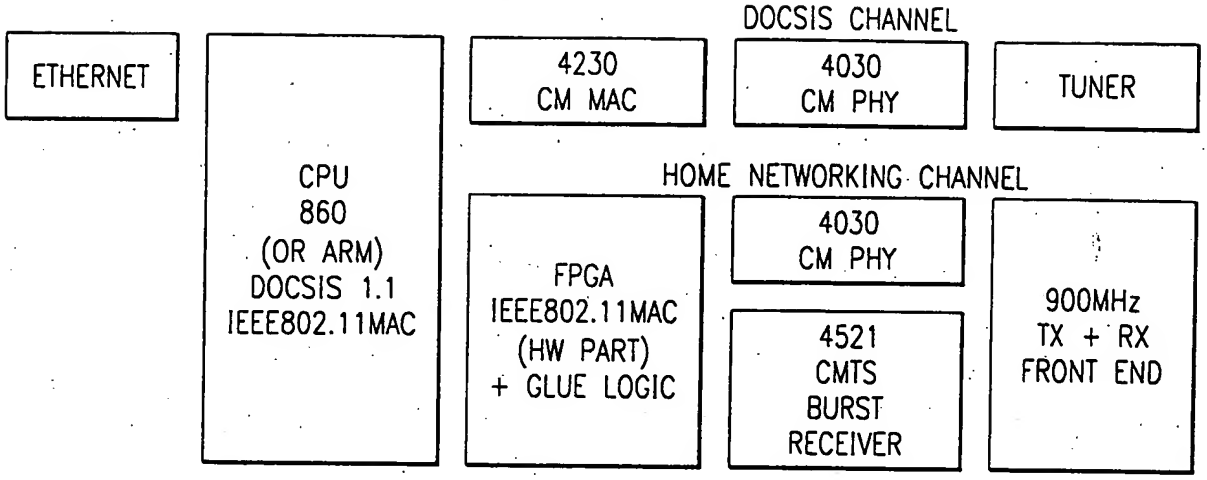
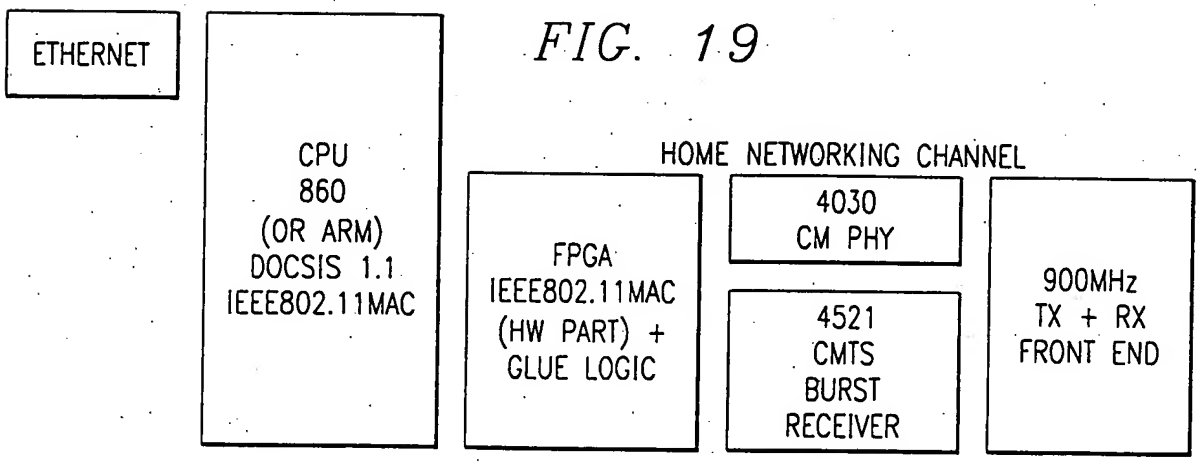

DOCSIS CHANNEL
ETHERNET
CPU
860
(OR ARM)
DOCSIS 1.1
IEEE802.11MAC
4230
CM MAC
4030
CM PHY
TUNER
HOME NETWORKING CHANNEL
FPGA
IEEE802.11MAC
(HW PART)
+ GLUE LOGIC
4030
CM PHY
4521
CMTS
BURST
RECEIVER
900MHz
TX + RX
FRONT END

FIG. 19


ETHERNET
CPU
860
(OR ARM)
DOCSIS 1.1
IEEE802.11MAC
HOME NETWORKING CHANNEL
FPGA
IEEE802.11MAC
(HW PART) +
GLUE LOGIC
4030
CM PHY
4521
CMTS
BURST
RECEIVER
900MHz
TX + RX
FRONT END

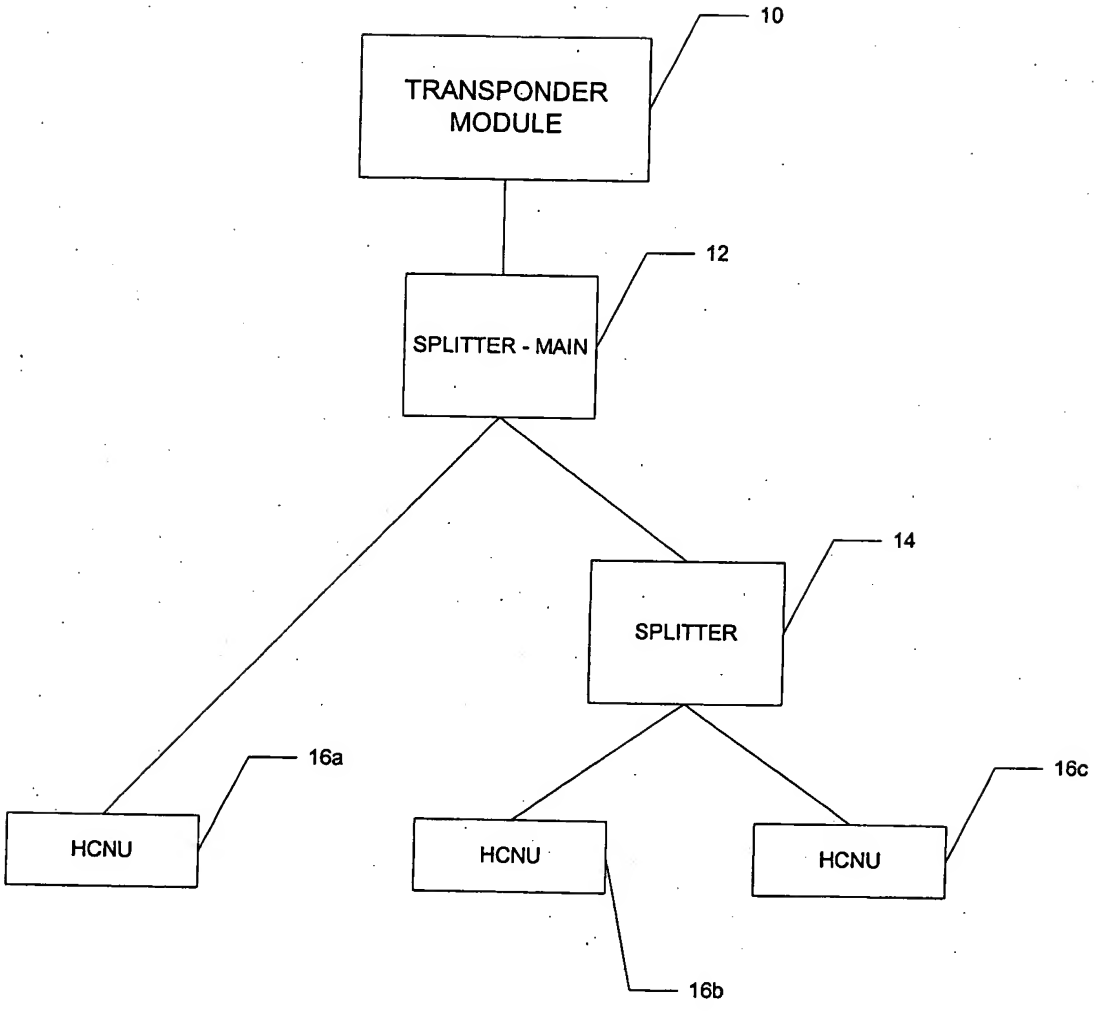

10
TRANSPONDER MODULE
12
SPLITTER - MAIN
14
SPLITTER
16a
HCNU
HCNU
16b
HCNU
16c

FIG. 20

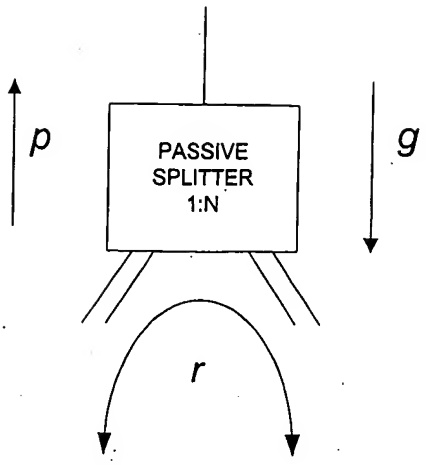



FIG. 21A

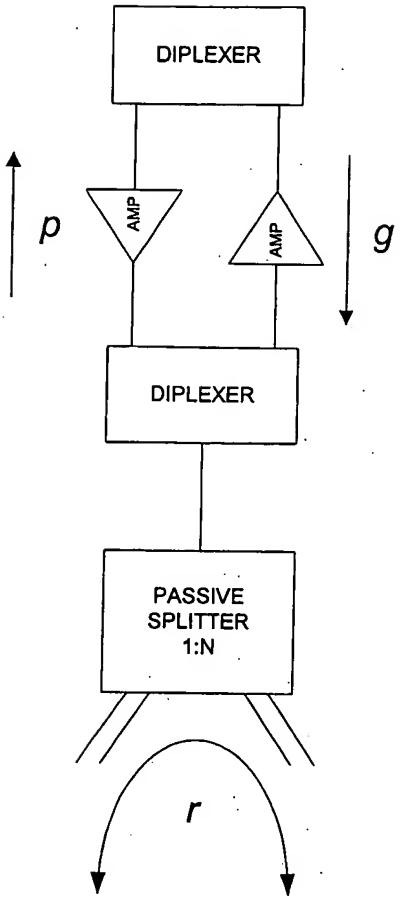



FIG. 21B

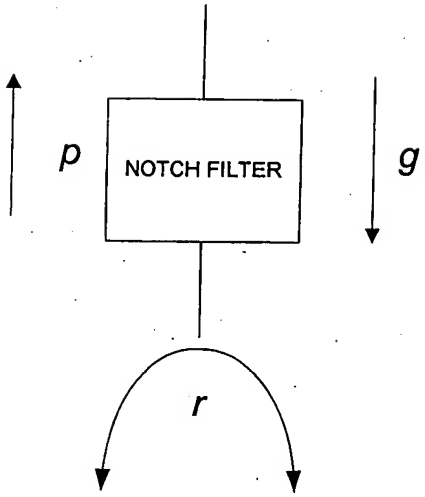



FIG. 21C